

REMARKS

The last Office Action has been carefully considered.

Claims 16-18 and 21 are rejected under 35 U.S.C § 112 ¶ 1 due to claim 16 claiming a valve embodiment deemed not adequately disclosed in the written description, and each of claims 17-18 and 21 dependent on claim 16.

Claims 1-7, 12-21, and 24 are rejected under 35 U.S.C § 112 ¶ 2 due to the term “lightweight” in claim 1 allegedly being indefinite and the term “undamped range” in claim 3 being unclear.

Claims 1-2 and 24 are rejected under 35 U.S.C § 102(b) as being anticipated by Wilson (U.S. Pat. No. 1,012,779).

Claim 3 is rejected under 35 U.S.C § 103(a) as being unpatentable over Wilson in view of Wang et al. (U.S. Pat. No. 6,896,236).

Claims 4-7 are rejected under 35 U.S.C § 103(a) as being unpatentable over Wilson in view of Gaskell (U.S. Pat. No. 4,889,288).

Claim 12 is rejected under 35 U.S.C § 103(a) as being unpatentable over Wilson in view of Koneda et al. (U.S. Pat. No. 6,681,730).

Claim 13 is rejected under 35 U.S.C § 103(a) as being unpatentable over Wilson in view of Cameron et al. (U.S. Pat. No. 4,190,076).

Claims 14-15 are rejected under 35 U.S.C § 103(a) as being unpatentable over Wilson in view of Volcov (U.S. Pat. No. 2,868,492).

Claims 16-21 are rejected under 35 U.S.C § 103(a) as being unpatentable over Wilson in view of Masaji (JP 58028079 A).

Claims 1-7, 12-15, 19-20, and 24 are pending in the present application; with Claim 1 being the sole independent claim, and Claims 8-11, 16-18, and 21-23 being withdrawn without prejudice.

Claims 1-2 and 15 are amended. No new subject matter is presented.

Regarding the rejection of claims 16-18 and 14 under 35 U.S.C § 112 ¶ 1, the above amendments are believed to overcome the rejection.

Regarding the rejection of claims 1-7, 12-21, and 24 under 35 U.S.C § 112 ¶ 2, the above amendments are believed to overcome the rejection.

Regarding the rejection of claim 1 under 35 U.S.C § 102(b), the Examiner states that Wilson anticipates each and every limitation of the claim. Wilson discloses a pulse valve 1 with a closing body 3 that cooperates with a valve seat 2 (Fig. 1). In operation of the pulse valve 1, Wilson explicitly teaches away the use of any spring for cooperation of the closing body 3 with the valve seat 2 (page 1 column 1 lines 11-16). Further, a person having ordinary skill in the art would understand that, in Wilson if a spring is to be used in the cooperation between the closing body 3 and the valve seat 2, the pulse valve 1 of Wilson which closes automatically by gravity (page 1 column 1 lines 11-16) may fail to close because of the spring. By contrast, the present application applies a valve spring 24 for cooperation between the closing body 18 and the valve seat 22 (specification page 6 lines 12-13 and 18-19, Fig. 1). Wilson fails to disclose at least the limitation of *a closing body (18) that cooperates with a valve seat (22) by at least a valve spring (24)* taught by amended claim 1.

Clearly, amended claim 1 structurally differs from Wilson.

Dependent claims 2-7, 12-15, 19-20, and 24 are deemed allowable due to their dependence on allowable independent claim 1.

In view of the preceding amendments and remarks, it is respectfully submitted that all of the pending claims, namely, Claims 1-7, 12-15, 19-20, and 24, are in condition for allowance.

Should the Examiner require or consider it advisable that the specification, claims and/or drawings be further amended or corrected in formal respects in order to place this case in condition for final allowance, then it is respectfully requested that such amendments or corrections be carried out by Examiner's Amendment, and the case be passed to issue. Alternatively, should the Examiner feel that a personal discussion might be helpful in advancing this case to allowance; he is invited to telephone the undersigned (at 631-549-4700).

Respectfully submitted,
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